

REMARKS/ARGUMENTS

By Office action dated July 12, 2004, the Examiner has rejected all claims of the pending application as being obvious over JP (58-178042) in view of GB (2345584) and in further view of U.S. Patent No. 4,069,719 to Cancilla. In response, claims 2, 6-7, 11-14, 16-18, 21 and 24-27 have been cancelled and independent claims 1 and 9 have been amended to overcome the rejections. In addition the Applicant has added new claims 28-31, which are also patentable over the prior art.

As amended, claim 1 is directed to a belt tensioning system comprising a dual arm tensioner, a crankshaft pulley and an AGS pulley, all engaged with an endless power transmission belt in an engine. The arms of the tensioner are maintained at a constant angle with respect to each other and a resilient device couples the arms to the base so as to bias the arms to pivot relative to the base. The AGS pulley, which is connected to an alternator and generator and starter apparatus ("AGS apparatus"), may operate as the driving pulley within the system. Alternatively, the crankshaft pulley may operate as the driving pulley. The first and second arms of the dual arm tensioner are positioned such that a rotatable pulley on the first arm engages a tight span of belt on one side of the driving pulley and a rotatable pulley on the second arm engages a slack span of belt on the opposite side of the driving pulley.

In accordance with the invention, independent claim 1 requires an AGS pulley connected to an alternator generator starter apparatus. Similarly, independent claim 9, which is directed to a method, requires the step of providing an AGS pulley connected to an alternator generator starter apparatus.

As understood by one of skill in the art and as defined in the specification of the present application, an AGS apparatus combines the functions of an alternator or generator and a starter into a single device. This understanding is further supported by the specification of the present application, which provides: "Innovations in the automobile industry have led to engines 10 utilizing the AGS as the motor for starting the engine 10 to eliminate a separate starter device

required in the prior art.” (Page 5, lines 5-6). Thus, the claimed AGS apparatus may either drive or be driven by the belt depending on its mode of operation.

The Examiner has rejected independent claims 1 and 9 under 35 U.S.C. §103 as being obvious over JP (58-178042) in view of GB (2345584). Although the Examiner admits that the primary reference, JP (58-178042), does not disclose an AGS pulley that is connected to an AGS apparatus, the Examiner further contends that GB (1345584) discloses a drive pulley connected to an alternator, a generator and a starter. According to the Examiner, it would have been obvious to one of ordinary skill in the art to combine the teachings of JP (58-178042) and GB (1345584) to arrive at the claimed inventions. Applicant respectfully traverses this rejection for the following reasons.

Contrary to the Examiner’s assertion, GB (1345584) does not disclose an AGS pulley connected to an alternator and generator and starter apparatus as required by the claims. Rather, GB (1345584) teaches an electric motor having a driving pulley that drives a separate alternator pulley and a separate generator pulley. It appears as though the driving pulley connected to the electric motor always drives the belt and that the alternator and generator pulleys are always driven by the belt. Furthermore, the starter of GB (1345584), which is only connected to the belt through the driving pulley of the electric motor, is never driven by the belt.

By comparison, the claimed AGS pulley, which corresponds to the alternator pulley of GB (1345584) may drive the system because it also corresponds to the driving/starter pulley. Likewise, the claimed AGS pulley, which corresponds to the driving/starter pulley of GB (1345584) may be driven by the system. Neither of these conditions are true with respect to the device disclosed in GB (1345584). Accordingly, although GB (1345584) discloses a device including an alternator, a generator and a starter, GB (1345584) does not teach an AGS pulley connected to an AGS apparatus as claimed and as understood by one of ordinary skill in the art.

Applicant respectfully submits that neither GB (1345584) nor JP (58-178042), either alone or in combination, teach the claimed AGS pulley connected to an AGS apparatus. Accordingly, neither GB (1345584) nor JP (58-178042), either alone or in combination, teach a

belt system having an AGS pulley in combination with a dual arm tensioner as claimed in independent claims 1 and 9.

Nevertheless, although the amended claims are patentable over the art relied upon the Examiner for at least above stated reason, Applicant admits that a belt tensioning system having an AGS pulley in combination with a dual arm tensioner is known elsewhere in the art. Specifically, as disclosed by the Applicant, US Application Ser. No. 10/014,833, now US Patent No. 6,609,989 (“the ‘989 patent”), teaches a dual arm tensioner used in conjunction with a crankshaft pulley and an AGS pulley. Thus, Applicant respectfully submits that the ‘989 patent is more relevant than the art thus far relied upon.

As amended, independent claims 1 and 9 each require an AGS pulley, a crankshaft pulley and a tensioner having (1) arms that are maintained at a constant angle with respect to each other, and (2) a resilient device that couples the arms to the base of the tensioner. These features are not disclosed by the prior art. Similarly, new claim 28 requires an AGS pulley, a crankshaft pulley and a dual arm tensioner having a base and a resilient device that couples at least one arm of the tensioner to the base.

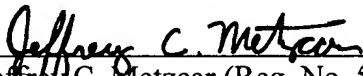
As detailed above, the combination of GB (1345584) and JP (58-178042) does not teach a dual arm tensioner used in conjunction with an AGS pulley. Moreover, although JP (58-178042) does teach a dual arm tension with arms that are maintained at a constant angle with respect to each other, it does not teach a tensioner with a resilient device that couples the arms to the base of the tensioner. By contrast, it is believed that JP (58-178042) teaches a linear actuator 54 that can actively, rather than passively, drive the arms in response to some control signal. Likewise, although as admitted above, the ‘989 patent teaches a dual arm tensioner used in conjunction with an AGS pulley, the ‘989 patent does not teach a tensioner with arms that are maintained at a constant angle with respect to each other or that are coupled to the base by a resilient device.

For at least these reasons, Applicant respectfully submits that independent claims 1, 9 and 28 are patentable over the prior art. Moreover, all other pending claims, original, amended, and

new, depend from independent claims 1, 9 or 28, and thus are patentable for at least the same reasons stated above.

In light of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case. The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or to credit any overpayment to Deposit Account 20-0809. Prompt and favorable examination is requested.

Respectfully submitted,


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